What is claimed is:

1. A medical probe assembly for ablating tissue, comprising:

an elongated member having a distal end;

two electrode elements mechanically coupled to the distal end of the elongated member; and

another electrode element mechanically coupled to the distal end of the elongated member between the respective two electrode elements, the two electrode elements and other electrode element being configurable as two bipolar electrode pairs, wherein the other electrode element is common to the bipolar electrode pairs;

wherein at least one of the two electrode elements and other electrode element is an array comprising a plurality of electrodes radially extendable from the elongated member.

2. The medical probe assembly of claim 1, wherein the elongated member is rigid.

3. The medical probe assembly of claim 1, wherein each of the two electrode elements is configurable only as an active element, and the other electrode element is configurable only as a return element.

4. The medical probe assembly of claim 1, wherein each of the two electrode elements is configurable only as a return element, and the other electrode element is configurable only as an active element.

5. The medical probe assembly of claim 1, wherein each of the electrode elements comprises a plurality of electrodes radially extendable from the elongated member.

6. The medical probe assembly of claim 1, wherein at least one of the two electrode elements and other electrode element is a ring electrode.

7. The medical probe assembly of claim 1, wherein the two electrode elements and other electrode element are mounted to the distal end of the elongated member in an axial arrangement.

8. The medical probe assembly of claim 1, further comprising an additional electrode element mechanically coupled to the distal end of the elongated member, wherein the two electrode elements, other electrode element, and additional electrode element are configurable as three bipolar electrode pairs.

9. The medical probe assembly of claim 1, wherein the plurality of electrodes are configured to be radially deployed from the elongated member.

10. A medical probe assembly for ablating tissue, comprising:

an elongated member having a distal end;

two electrode arrays mechanically coupled to the distal end of the elongated member, each of the two electrode arrays comprising a plurality of needle electrodes; and

another electrode array mechanically coupled to the distal end of the elongated member between the respective two electrode arrays, the other electrode array comprising a plurality of needle electrodes, the two electrode arrays and other electrode array being configurable as two bipolar electrode pairs, wherein the other electrode array is common to the bipolar electrode pairs.

11. The medical probe assembly of claim 10, wherein the elongated member is rigid.

12. The medical probe assembly of claim 10, wherein each of the two electrode arrays is configurable only as an active array, and the other electrode array is configurable only as a return array.

13. The medical probe assembly of claim 10, wherein each of the two electrode arrays is configurable only as a return array, and the other electrode array is configurable only as an active array.

14. The medical probe assembly of claim 10, wherein the two electrode arrays and other electrodes array are deployable from the elongated member.

15. The medical probe assembly of claim 14, wherein the needle electrodes of the two electrode arrays assume an outwardly curved shape when deployed.

16. The medical probe assembly of claim 14, wherein the needle electrodes of the two electrode arrays assume an everted shape when deployed.

17. The medical probe assembly of claim 16, wherein the needle electrodes of each of the two electrode arrays assume a proximally everted shape when deployed.

18. The medical probe assembly of claim 16, wherein the two electrode arrays comprises a proximal electrode array and a distal electrode array, the electrodes of the proximal electrode array assume a distally everted shape when deployed, and the electrodes of the distal electrode array assume a proximally everted shape when deployed.

19. The medical probe assembly of claim 14, wherein the needle electrodes of the other electrode array assume an outwardly straight shape when deployed.

20. The medical probe assembly of claim 14, wherein the elongated member comprises an inner shaft and a cannula having a lumen in which the inner shaft is

reciprocatably disposed, the other electrode array and at least one of the two electrode arrays is mounted to the inner shaft, and the other electrode array and at least one of the two electrode arrays can be alternately deployed from and housed within the cannula lumen.

21. The medical probe assembly of claim 20, wherein the other of the two electrode arrays is mounted to the inner shaft and can be alternately deployed from and housed within the cannula lumen.

22. The medical probe assembly of claim 20, wherein the cannula is an inner cannula, the medical probe assembly further comprising an outer cannula having a lumen in which the inner cannula is reciprocatably disposed, wherein the other of the two electrode arrays is mounted to the inner cannula and can be alternately deployed from and housed within the outer cannula lumen.

23. The medical probe assembly of claim 10, wherein the two electrode arrays and other electrode array are mechanically coupled to the distal end of the elongated member in an axial arrangement.

24. The medical probe assembly of claim 10, further comprising an additional electrode array mechanically coupled to the distal end of the elongated member, wherein the two electrode arrays and other electrode array are configurable as three bipolar electrode pairs.

25. A tissue ablation system, comprising:

a medical probe assembly comprising an elongated member, two electrode elements mechanically coupled to a distal end of the elongated member, and another

electrode element mechanically coupled to the distal end of the elongated member between the respective two electrode elements, and wherein at least one of the two electrode elements and other electrode element is an array comprising a plurality of electrodes radially extendable from the elongated member;

a controller for configuring the two electrode elements and other electrode element as two bipolar electrode pairs, wherein the other electrode element is common to the bipolar electrode pairs; and

an ablation source electrically coupled to the two electrode elements and the other electrode element.

26. The system of claim 25, wherein the elongated member is rigid.

27. The system of claim 25, wherein the controller can configure each of the two electrode elements as an active element, and the other electrode element as a return element.

28. The system of claim 25, wherein the controller can configure each of the two electrode elements as a return element, and the other electrode element as an active element.

29. The system of claim 25, wherein the electrodes of the at least one electrode array are needle electrodes.

30. The system of claim 25, wherein each of the two electrode element and other electrode element comprises a plurality of electrodes radially extendable from the elongated member.

31. The system of claim 25, wherein at least one of the two electrode elements and other electrode element is a ring electrode.

32. The system of claim 25, wherein the two electrode elements and other electrode element are mounted to the distal end of the elongated member in an axial arrangement.

33. The system of claim 25, wherein the medical probe assembly further comprises an additional electrode element mechanically coupled to the distal end of the elongated member, wherein the controller can configure the two electrode elements, other electrode element, and additional electrode element as three bipolar electrode pairs.

34. The system of claim 25, wherein the ablation source is a radio frequency ablation source.

35. The system of claim 25, wherein the controller is configured for causing the ablation source to simultaneously convey ablation energy to the bipolar electrode pairs.

36. The system of claim 25, wherein the controller is configured for causing the ablation source to sequentially convey ablation energy to the bipolar electrode pairs.

37. A method of treating tissue having a diseased region, comprising:

placing two electrode elements in contact with the diseased region;

placing another electrode element in contact with the diseased region in an axial arrangement with the two electrode elements, the other electrode element being between the two electrode elements; and

conveying ablation energy between the two electrode elements and the other element to create two ablation regions within the diseased region, wherein the two ablation regions, in composite, form a three-dimensional lesion.

38. The method of claim 37, wherein the ablation energy is conveyed from the two electrode elements to the other electrode element.

39. The method of claim 37, wherein the ablation energy is conveyed from the other element to the two electrode elements.

40. The method of claim 37, further comprising:

placing an additional electrode element in contact with the tissue in the axial arrangement; and

conveying ablation energy between the additional electrode element and one of the two electrode element to create an additional ablation region within the diseased region, wherein the two ablation regions and the additional ablation region, in composite, create the three-dimensional lesion.

41. The method of claim 37, wherein the ablation energy is radio frequency energy.

42. The method of claim 37, wherein the ablation energy is simultaneously conveyed between the two electrode elements and the other electrode element.

43. The method of claim 37, wherein the ablation energy is sequentially conveyed between the two electrode elements and the other electrode element.

44. The method of claim 37, wherein the diseased region is a tumor.

45. The method of claim 37, wherein the diseased region has a thickness, the two electrode elements and the other electrode element are distributed along the thickness of the diseased region, and the lesion is created through the thickness of the diseased region without moving the two electrode elements and the other electrode element.

46. The method of claim 37, wherein the two electrode elements and other electrode element are mounted on a single medical ablation probe.

47. The method of claim 37, wherein the two electrode elements and other electrode element are mounted on two medical ablation probes.